



Total Joint Replacement

Hoag Orthopedic Institute

Ambulatory Surgery Centers

Total Knee Replacement

Getting You Back to You



The Knee

Knee Joint

- Hinge joint made up of the:
 - Femur (thigh bone)
 - Tibia (shin bone)
 - Patella (kneecap)

Ligament

- Tough, flexible fibrous connective tissue which connects two bones or cartilages or holds a joint together

Cartilage

- Strong, flexible connective tissue that protects your joints and bones

Synovial fluid

- Liquid that lubricates the joint and keeps it moving smoothly



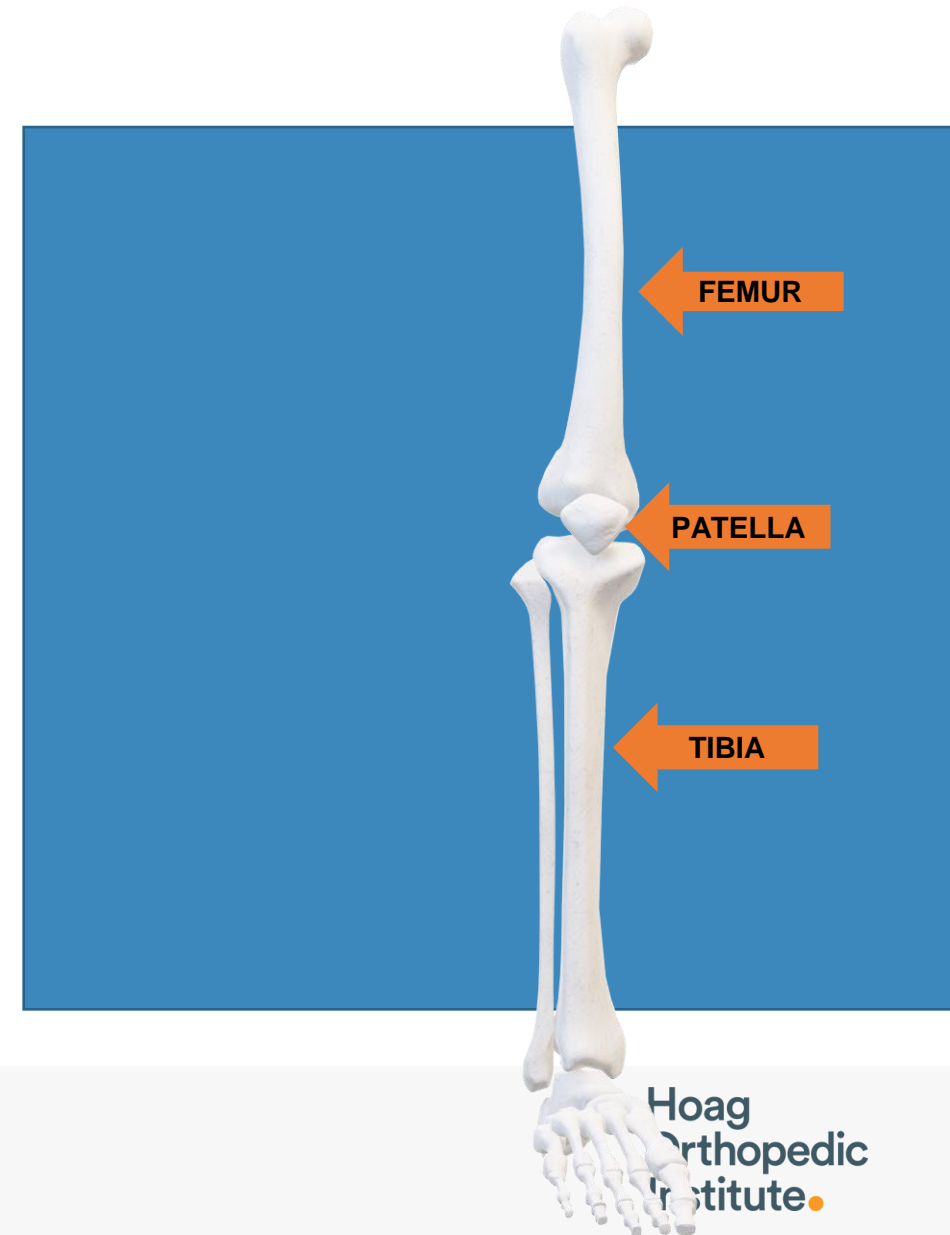
Knee Replacement

The end surface of the femur and tibia are replaced with components.

- Femoral Component
- Tibial Component

A plastic liner is inserted between the femur and tibia to reduce wear.

The patella is resurfaced, and a button is added.



Pre-Surgery: Preparation

Review your surgery forms.

Make appointments for:

- Primary care physician for medical clearance
- Any ordered testing
 - Labs, EKG, etc.

Complete pre-operative forms.

Complete the requirements outlined in your surgery packet.

- Return required information to your surgeon's office at least one week before your surgery, preferably two.



Pre-Surgery: Plan Your Recovery

Start planning your recovery at home now.

Determine who will help you

- Spouse, family member, friend

Determine where you will recovery

- Your own home, at a family member or friend's home

Plan to have your caregiver be available to help for the first 48-72 hours at home.



Pre-Surgery: Plan Your Recovery

Clothing, the day of surgery and during your recovery.

- Wear loose, comfortable clothes that are easy to get on and off
 - Shorts and dresses are often easier than long pants to get on and off
- Choose shoes with closed toes and backs that you can slip on and off



Pre-Surgery: Home Preparation



Your “safety zone” is the area between your shoulders and hips. Keeping commonly used items in this area prevents you having to bend and reach thus reducing the risk of falls.

Arrange	Arrange frequently used items in your “safety zone”
Remove	Remove loose throw rugs
Clear	Clear hallways for use of walker
Make	Make plans for your pets
Use	Use night lights
Create	Create charging stations next to areas where you sit or lie down

Pre-Surgery: Bathroom Preparation

Make sure you have non-skid surfaces.

Equipment that may be helpful:

- 3:1 Commode
 - Use as a toilet riser and / or shower chair combo
 - Ask yourself: "Is my toilet low?," "Am I tall?," "Does it hurt to get onto/ off my toilet right now?"
 - If the answer is yes to any of the above, a 3:1 commode is a great option to reduce pain. Look at those arms!
- Shower Chair
- Tub Transfer Bench



Pre-Surgery: Equipment

Walkers

- Walkers are used after surgery (think safety)
- Your surgeon's office will tell you how to acquire a walker
- **If You are Purchasing a Walker:**
 - Amazon.com, Walmart.com, your local DME store
 - Your walker will come with instructions for adjusting the height. Please review the instructions for fit and adjustment before your surgery.
 - *If you are instructed to purchase a walker, contact your insurance company to see if you can be reimbursed.*

A few things to remember about fit

- When your arms are relaxed at your sides:
 - The crease on the inside of your wrist should line up with the walker grips
- When holding onto the walker grips:
 - Relax your shoulders
 - Your elbows will be slightly bent



Pre-Surgery: Practice Stairs

Stairs:

- Patients can use stairs the day of surgery
- If you have the option, plan to spend your first night or few downstairs
- Practice before your surgery



Pre-Surgery: Practice Getting in and out of a Car

Before getting into a car:

- Have someone move the seat as far back as it will go
- Recline the back of the seat if possible
- Remember your precautions

Getting into a car:

- Back up to the open doorway of the car
- Hold onto the side of the car or dashboard and the walker for support
- Lower yourself slowly onto the seat. Watch your head
- Bringing your legs into the car by:
 - Sliding back into the center of the seat so you are not sitting on the edge
 - Lifting your legs one at a time into the car
- Keep your car seat as high as possible

Getting out of a car:

- To bring your legs out of the car
 - Slide to the edge of the seat
 - Lift your legs out of the car one at a time
- To stand up
 - Make sure your feet are on the ground
 - Place the walker as close as possible
 - Use the car seat or jam (a car cane can help) and the crossbar of the walker to stand (never try to stand with just the walker, it could tip over)
 - Raise yourself slowly



Pre-surgery: Optimization

Nutrition: Before and After Surgery

Begin increasing protein intake a few weeks before surgery to build up strength and to help with healing post operatively.

- Focus on high quality proteins such as poultry, lean beef, eggs, nuts, seeds, fish
- Consider an oral nutrition supplement/drink for additional protein intake



Pre-Surgery: Optimization

Stop Smoking	Stop smoking now <ul style="list-style-type: none">• 4 Weeks before surgery reduces complications 20-30%
Stop Alcohol	Stop alcohol 1 week before surgery
No Dental Work	No dental work 2 weeks before surgery <ul style="list-style-type: none">• Discuss with your surgeon and dentist the guidelines for antibiotics with all future dental care
No Manicures or Pedicures	No professional manicure/pedicure 2 weeks before surgery.
No Shaving	No shaving any body hair below the neck the 3 days prior to your surgery <ul style="list-style-type: none">• Facial shaving is permitted before surgery

Pre-Surgery: Stopping Medications that Thin the Blood

PRESCRIPTION blood thinners

- Consult your prescribing physician for when to **stop**
- Your surgeons will tell you when it can be resumed

Prescription Blood Thinner Examples:

- Coumadin (Warfarin)
- Eliquis (Apixaban)
- Lovenox (Enoxaparin)
- Plavix (Clopidogrel)
- Pradaxa (Dabigatran)
- Xarelto (Rivaroxaban)
- Aspirin (*an NSAID sometimes prescribed to thin the blood)

NSAIDs

- **Stop 7 days prior** to surgery
- You may not restart them until okayed by your surgeon

NSAID Examples:

- Aspirin -Bufferin, Ecotrin, Aspercreme...
- Aspirin containing drugs
- Ibuprofen – Advil, Motrin, Nuprin
- Naproxen – Aleve
- Voltaren – diclofenac
- Mobic – meloxicam
- Celebrex – celecoxib
- Indomethacin

Pre-Surgery: More Medications

Hormone Replacement: Consult your surgeon for when to **stop and restart**

GLP-1 agonist Medications:

- If you are taking a GLP-1 agonist medication for diabetes or weight loss, talk to your surgeon
- These medications often need to be stopped before surgery

Examples:

- Dulaglutide (Trulicity)
- Exenatide extended release (Bydureon bcise)
- Exenatide (Byetta)
- Semaglutide (Ozempic)
- Liraglutide (Victoza, Saxenda)



Pre-Surgery: Stopping Supplements

Stop taking herbal supplements 14 days before surgery

Herbal supplements are derived from different parts of plant.

They come in many forms including:

- Tablets, capsules, teas, tinctures, oils, lotions, or ointments

These are a few examples:

- CBD or THC containing products, aloe vera, echinacea, ephedra, feverfew, green tea, garlic, ginkgo biloba, ginseng, ginger, golden seal, kava, licorice, saw palmetto, Valeria root, Saint John's wort, turmeric

Discuss any other supplements or vitamins that you take with your surgeon.

- Your surgeon will notify you if they need to be stopped



Infection Prevention: Before and After Surgery

- Wash your hands often with soap and water or an alcohol-based hand sanitizer
- Avoid touching your eyes, nose and mouth; germs spread this way
- Brush your teeth
- Avoid contact with sick people
- Clean and disinfect surfaces and objects that may be contaminated with germs



Pre-Surgery: Infection Prevention

Your surgeon will give you directions for showering with
Chlorhexidine gluconate (CHG)

CHG is both a soap and antiseptic that kills germs on contact

- **CHG** safely binds to the skin and can continue killing germs for up to 24 hours
- **CHG** has a cumulative effect, so the protection against germs increases with repeated use

Nasal antiseptic

- **Nasal antiseptic** has been shown to inhibit the growth of bacteria in the nose over a period of up to 12 hours in studies

Day of Surgery: Do not apply lotion, creams, powder, or makeup on the day of surgery

Pre-Surgery: Things to Do

Review instructions provided by the surgeon's office.

Make sure you know the time to stop eating and drinking.

Know the time to be at the surgery center and please be on time.

Infection Prevention

- Sleep on clean sheets
 - Change your sheets 5 days before surgery and the day before
- Wear clean pajamas
- Keep pets off your bed



Pre-Surgery: Hydration, Carbohydrate Loading

THE NIGHT BEFORE SURGERY

Drink one of these the night before your surgery IF recommended by your surgeon:

- 16fl oz (2cups) Gatorade

OR

- 2 Bottles Ensure® Pre-Surgery Carbohydrate Clear Nutrition Drink

DO NOT eat any solid food after midnight

THE DAY OF SURGERY

Drink one of these 2-3 hours before your surgery, IF recommended by your surgeon:

- 16fl oz (2cups) Gatorade

OR

- 1 Bottle Ensure® Pre-Surgery Carbohydrate Clear Nutrition Drink



Pre-Surgery: Hydration, The Day of Surgery

THE DAY OF SURGERY:

- You may drink clear liquids up to 3 hours before your scheduled surgery time.
- Limit the clear liquid volume to 1½ cups or 12 ounces per hour.

What clear liquids can I drink and NOT drink the morning of surgery?

Allowed	DO NOT CONSUME
Water	Milk, Dairy, or Alternative Dairy Products
Apple & Cranberry Juice	Citrus Juices (any juice that separates)
Gatorade or equivalent carb containing sports drinks	Prune Juice, Mango juice
Ensure® Pre-Surgery Carbohydrate Clear Nutrition Drink	Juices with Pulp or Fibers
PLAIN Coffee or Tea (No milk or creamer)	Alcoholic Beverages

DO NOT consume liquids on the day of surgery if you have:

- Hx of esophageal surgery, hiatal hernia, difficult intubation, GERD, Gastrointestinal dysmotility or obstruction, diabetes mellitus, chronic opioid use, neurologic disease other than your spinal condition, BMI > 35

Day of Surgery: Pre-Op

- Consents reviewed and signed
- An intravenous line will be placed
- You will meet your Anesthesiologist and discuss anesthesia
 - Most patients have spinal anesthesia
 - Patients are asleep with spinal anesthesia



Day of Surgery: Operating Room

- Anesthetic medication will be given
- You will be positioned on a table that is specially designed for your surgery
- Your surgical area will be scrubbed with surgical prep



Post Anesthesia Care Unit (PACU)

You will “wake up” in the PACU (recovery room)

Your nurse:

- Assesses your medical condition
- Provides pain management as needed
- Teaches you to get in and out of bed
- Instructs you on how to walk with a walker

Before discharge:

- X-rays are taken of your new joint
- You will urinate



After Discharge: Physical Therapy

Physical therapy after surgery

- Arrangements are made by the surgeon office for **home health** physical therapy, IF your surgeon determines it is needed.
- Your surgeon will give you a prescription for **outpatient** physical therapy.



At Home: Preventing Pain

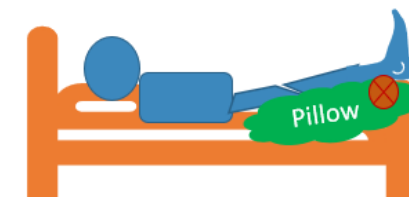
Cold Therapy	<p>Use ice packs or a cold therapy ice machine.</p> <p>Never apply ice therapy directly to the skin. Have a protective barrier such as a towel.</p> <p>Check your skin often.</p> <p>Allow time for your skin to warm to its normal temperature between applications.</p>
Elevation	<p>Think “toes above the nose.”</p> <p>Elevate the affected extremity above the level of the heart if possible.</p> <p>Elevation reduces swelling which in turn reduces pain.</p>
Distraction	<p>Distract yourself with relaxing activities you can do while sitting or laying down.</p> <ul style="list-style-type: none">• TV, electronics, reading
Oral Medications	<p>Take only as prescribed.</p> <p>PRN means as needed. Do not take PRN medication if you do not need it.</p> <p>Narcotics -use the minimal dose of the narcotic to get the maximum effect.</p>

At Home: Activity, the First Few Weeks

Lying Down & Elevating the Surgical Leg

“Toes above the nose.”

Elevate 3-4 times a day for 45 minutes to an hour during the day.



Sitting

Keep your leg straight.

Limit sitting with your feet on the ground to meals and chair exercises to avoid getting stiff.



Walking

Take short, frequent walks hourly while awake.

Use your walker or cane as determined by your therapist.



- Remember to move / wiggle around when lying down and sitting. Pump your feet often. This will help to keep you comfortable.

At Home: Positioning

Leg Extension

Purpose: Promotes leg straightening.

Your leg needs to be in extension (straight) when lying down or sitting.
Place a rolled towel or small rolled blanket under ankle.



Never place a single pillow or anything under the surgical knee that creates a bend!

It is important that your leg can straighten and bend. When resting, you will focus on passive extension.

Home: Constipation Prevention

Have a Plan

Establish a plan with your surgeon before surgery

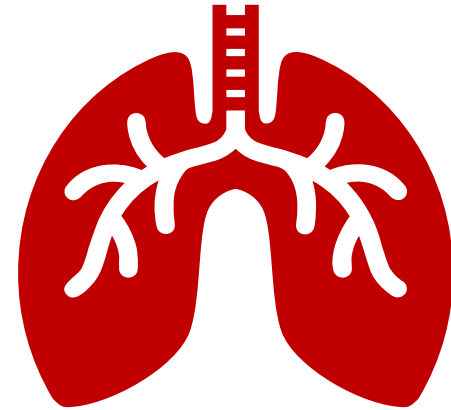
- Pick up medication to prevent constipation before surgery
 - Use a laxative like Miralax until you are regular and off narcotics
- Drink 8-10 cups of water a day
- Increase your fiber intake
- Get Moving – take short, frequent walks



At Home: Deep Breathing Exercises

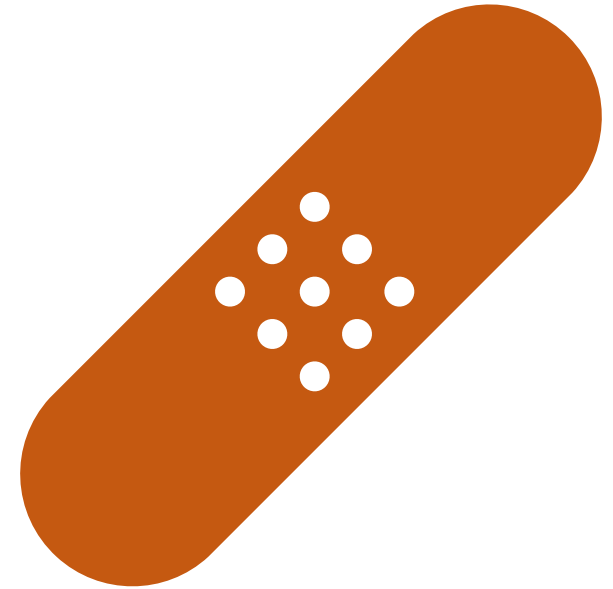
Deep Breathing

1. Sit up straight and tall
2. Relax
3. Take a deep breath, slow breath in
4. Hold your breath in for 3 seconds
5. Let it out
6. Repeat about 10 breaths every hour, but not 10 times in a row



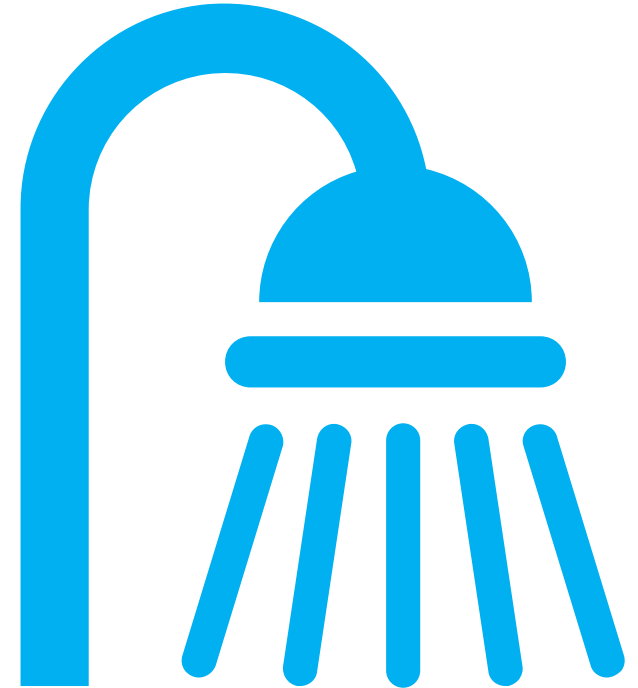
At Home: Your Dressing

Instructions for dressing changes will be given at discharge



Showering

- You may shower after surgery
- Your dressing is showerproof
- Do not submerge the incision until your surgeon gives the ok
 - No baths, swimming, or spas



At Home: DVT Prevention

A DVT (deep vein thrombosis) is a rare surgical complication. It is important to know the signs.

Let your surgeon know if you:

- Have new swelling in one leg not related to an injury
- Your calf (back of lower leg) is tender or painful when you push on it
- Your calf feels warm or hot to touch compared to the other leg



Prevent Blood Clots:

- Get moving
 - Take short, frequent walks
 - Perform ankle pumps when sitting or lying down
 - at least 10 times an hour



At Home: DVT Prevention, Blood Thinner

- You will be placed on a blood thinner after surgery
- Know your blood thinner
- Your blood thinner must be taken as prescribed
- Aspirin is commonly prescribed as a blood thinner after surgery
 - If purchasing over the counter, make sure to select the coated aspirin
 - Take aspirin with food or just after a meal to protect your stomach



Home: Recovery

Expect:

Pain

- Take it easy the first two weeks
- Use your pain medications as prescribed

Swelling

- Elevate
- Ice

Bruising

- Bruising / discoloration is normal
- Bruising can occur on the whole leg after total knee surgery

Be Aware:

- Dizziness / Lightheadedness can occur
- Go slow when standing up
- Use your walker

At Home: When to Call the Surgeon

Call your surgeon if you have any:

- Severe pain that is not controlled with pain medicine or is getting worse
- Heavy bleeding from the incision
- Signs of infection:
 - Fever over 102 degrees Fahrenheit
 - Redness, swelling, warmth around the incision or drainage of pus
 - Severe vomiting or cannot keep food down

Thank You



Getting You Back to You

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The information in this presentation is designed as a general guide, while the information provided by your physician is specific to your individual needs.

